U.S. Patent Appln. No.: 10/585,693

**AMENDMENTS TO THE CLAIMS** 

This listing of claims will replace all prior versions and listings of claims in the

application:

LISTING OF CLAIMS:

1. (currently amended): A transgenic bird which is obtained as a G1 transgenic

bird or an offspring thereof by:

a) incubating a fertilized avian egg to form an early embryo; a)

b) microinjecting, into the early embryo thereof at a stage except for and after the

blastodermic stage just after egg laying, a replication-deficient retroviral vector coding for a

desired protein an antibody into the early embryo, wherein the microinjection occurs at least 24

hours after the start of the incubation;

b) allowing the egg to hatch out to thereby obtain a G0 transgenic chimeric bird, and

c) mating the G0 transgenic chimeric bird with another G0 transgenic chimeric bird or

an offspring thereof or with a wild-type bird;

wherein the antibody content is not lower than 5µg/ml in blood, not lower than 1µg/ml in

egg white, and not lower than 1µg/ml in egg yolkearly embryo is at least 24 hours after the start

of incubation.

2. (canceled).

3. (currently amended): The transgenic bird according to Claim 2Claim 1, wherein

the microinjection of the early embryo is occurs at least 48 hours after the start of the incubation.

U.S. Patent Appln. No.: 10/585,693

4. (canceled).

5. (currently amended): The transgenic bird according to Claim 1, wherein the

bird is a chicken or a quail.

**6. (currently amended):** A transgenic bird, which is a G2 transgenic bird or an

offspring thereof obtained by mating the G1 transgenic bird according to Claim 1 with a G0

transgenic bird, another G1 transgenic bird or an offspring thereof, or with a wild-type bird.

7. (withdrawn - currently amended): A method for constructing a G1 transgenic

bird, -which comprises incubating a fertilized avian egg,

a) microinjecting, into the early embryo thereof at a stage except for and after the

blastodermic stage just after egg laying, a replication-deficient retroviral vector coding for a

desired protein,

c)

b) allowing the egg to hatch out to thereby obtain a G0 transgenic chimeric bird, and

mating the G0 transgenic chimeric bird with another G0 transgenic chimeric bird

or an offspring thereof or with a wild-type bird.

U.S. Patent Appln. No.: 10/585,693

incubation.

**8. (withdrawn - currently amended):** The method for constructing a transgenic bird according to Claim 7, wherein the early embryo is at least 24 hours after the start of

- 9. (withdrawn currently amended): The method for constructing a transgenic bird according to Claim 8, wherein the early embryo is at least 48 hours after the start of incubation.
- 10. (withdrawn currently amended): The method for constructing a transgenic bird according to Claim 7,—wherein the desired protein is an antibody.
- 11. (withdrawn currently amended): The method for constructing a transgenic bird according to Claim 7,—wherein the bird is a chicken or a quail.
- 12. (withdrawn currently amended): The method for constructing a transgenic bird according to Claim 7, which comprises microinjecting a replication-deficient retroviral vector having a titer of not lower than  $1 \times 10^7$  cfu/ml.
- 13. (withdrawn currently amended): The method for constructing a transgenic bird according to Claim 12, which comprises microinjecting a replication-deficient retroviral vector having a titer of not lower than  $1 \times 10^9$  cfu/ml.

U.S. Patent Appln. No.: 10/585,693

14. (withdrawn - currently amended): A method for constructing a transgenic bird,

which comprises mating the G1 transgenic bird according to Claim 1 with a G0 transgenic bird,

another G1 transgenic bird or an offspring thereof or with a wild-type bird to construct a G2

transgenic bird or an offspring thereof.

15. (withdrawn - currently amended): A method for producing a protein, -which

comprises extracting a desired protein from somatic cells, blood or eggs from a transgenic bird

constructed by the method according to Claim 7.

16. (withdrawn - currently amended): A method for sorting out a reproductive

lineage transgenic chimeric bird, -which comprises collecting sperm samples from transgenic

birds according to Claim 1 and testing them for the gene in the sperm.

17. (withdrawn - currently amended): The method for constructing a transgenic

bird according to Claim 7, -wherein the replication-deficient retroviral vector is a vector derived

from Moloney murine leukemia virus.

18. (withdrawn - currently amended): The method for constructing a transgenic

bird according to Claim 7, wherein the replication-deficient retroviral vector is VSV-G

pseudotyped.

U.S. Patent Appln. No.: 10/585,693

19. (withdrawn - currently amended): The method for constructing a transgenic

bird according to Claim 7, wherein the replication-deficient retroviral vector contains a non-

retrovirus-derived gene.

20. (withdrawn - currently amended): The method for constructing a transgenic

bird according to Claim 19, wherein the non-retrovirus-derived gene is controlled under the

chicken β-actin promoter.

21. (withdrawn - currently amended): The method for constructing a transgenic

bird according to Claim 19, wherein the non-retrovirus-derived gene codes an antibody.

22. (withdrawn - currently amended): The method for constructing a transgenic

bird according to Claim 21, -wherein the antibody is a chimeric antibody.

23. (withdrawn - currently amended): The method for constructing a transgenic

bird according to Claim 22, wherein the chimeric antibody is scFv-Fc antibody.

24-27. (canceled).

28. (withdrawn - currently amended): A method for sorting out a reproductive

lineage transgenic chimeric bird, -which comprises incubating a fertilized avian egg,

microinjecting, into the early embryo thereof at a stage except for and after the blastodermic

U.S. Patent Appln. No.: 10/585,693

stage just after egg laying, a replication-deficient retroviral vector coding for a desired protein

and confirming the gene coding for the desired protein in the sperm of the male G0 transgenic

bird obtained by hatching.

29. (withdrawn - currently amended): A method for sorting out a transgenic bird,

which comprises confirming the expression of the desired protein in the blood of the transgenic

bird according to Claim 1.

30. (withdrawn - currently amended): A method for sorting out a G0 transgenic

chimeric bird, -which comprises incubating a fertilized avian egg, microinjecting, into the early

embryo thereof at a stage except for and after the blastodermic stage just after egg laying, a

replication-deficient retroviral vector coding for a desired protein and confirming the expression

of the desired protein in the blood of the G0 transgenic bird obtained by hatching.

31. (new): The transgenic bird according to Claim 1, wherein the antibody is a scFv-

Fc antibody, and wherein the scFv-Fc antibody content is not lower than 20µg/ml in blood, not

lower than 5µg/ml in egg white, and not lower than 1µg/ml in egg yolk.